

PROJECT SUMMARY:

THE PROJECT SCOPE INCLUDES THE DESIGN, SPECIFICATION, PROCUREMENT, INSTALLATION AND COMMISSIONING OF A COMPLETE, TURN-KEY, GRID-TIED PHOTOVOLTAIC ELECTRIC SYSTEM.

MODULE TYPE	(76) Q CELL Q.PEAK-G4.1 305
INVERTER	(1) SE11400A-US (1) SE6000H-US
OPTIMIZER	(76) SOLAREEDGE P320
ARRAY PITCH	16°
ARRAY AZIMUTH	140°
RACKING	IRONRIDGE XR100 ALUMINUM RAIL
ROOF ATTACHMENT	ALUMINUM L-FEET WITH SS LAG SCREWS, 3 X5/16

AUTHORITIES HAVING JURISDICTION:

BUILDING AUTHORITY	PORTLAND ME
ELECTRICAL AUTHORITY	PORTLAND ME
ZONING/PLANNING AUTHORITY	PORTLAND ME
ELECTRICAL UTILITY	CMP

DESIGN CRITERIA:

OCCUPANCY	RESIDENTIAL
DESIGN WIND LOAD	100 MPH
RISK CATEGORY	I
GROUND SNOW LOAD	95 PSF
EXPOSURE CATEGORY	C
ROOF HEIGHT	6' ABOVE GRADE TO EAVES
ROOF COMPOSITION	ASPHALT SHINGLE
RAFTER	2"X10"
RAFTER SPACING	UNKNOWN








SHEET LIST:

G001	TITLE SHEET
A001	SITE PLAN
A002	MODULE LAYOUT
E001	ONE-LINE DIAGRAM

GENERAL NOTES:

1. ALL WORK SHALL COMPLY WITH LOCAL AND STATE ORDINANCES AND BUILDING CODES.
2. ELECTRICAL INSTALLATION SHALL COMPLY WITH STATE AND LOCALLY ADOPTED ELECTRICAL CODE.
3. ROOFTOP PENETRATIONS SHALL BE SEALED.
4. ALL EQUIPMENT SHALL BE LISTED AND TESTED BY A RECOGNIZED LABORATORY.
5. SYSTEM SHALL CONFORM TO RAPID SHUTDOWN REQUIREMENTS PER NEC 690.
6. CONDUIT RUNS BETWEEN SUB-ARRAYS, COMBINERS, AND DISCONNECTS SHALL BE INSTALLED IN THE MOST DIRECT ROUTE POSSIBLE.
7. ELECTRICAL EQUIPMENT SHALL BE INSTALLED TO MAINTAIN CLEARANCES REQUIRED BY NEC 110.
8. EQUIPMENT SHALL BE LABELED PER NEC 2017 REQUIREMENTS.

SYMBOLS:

 MOD	PV MODULE	 M	POWER METER
 MLPE	MODULE LEVEL POWER ELECTRONICS / OPTIMIZER		FUSED DISCONNECT SWITCH
	DC COMBINER AND DC DISCONNECT		NON-FUSED DISCONNECT SWITCH
•	PV DC TO AC INVERTER		
	60A ENCLOSED CIRCUIT BREAKER		



142 PRESUMSCOT STREET
PORTLAND, ME 04103
(207)-221-6342

CLIENT:

RIVERSIDE GOLF COURSE
1158 RIVERSIDE ST
PORTLAND ME, 04103

SYSTEM TYPE:

23.18KWDC SOLAR
PHOTOVOLTAIC SYSTEM

DESIGNED BY: STE

REVISION: 0

PRINT SIZE: 11" X 17"

DATE: 2/21/2018

DWG TITLE:

TITLE SHEET

DWG NUMBER:

G001

© COPYRIGHT REVISION ENERGY

THIS DIAGRAM IS PROVIDED AS A SERVICE AND IS BASED ON THE UNDERSTANDING OF THE INFORMATION SUPPLIED. IT IS SUBJECT TO CHANGE BASED ON ACTUAL CONDITIONS, APPLICABLE EDITION OF THE NATIONAL ELECTRIC CODE, AND LOCAL GOVERNMENTAL AUTHORITIES.

PROJECT SUMMARY:

THE PROJECT SCOPE INCLUDES THE DESIGN, SPECIFICATION, PROCUREMENT, INSTALLATION AND COMMISSIONING OF A COMPLETE, TURN-KEY, GRID-TIED PHOTOVOLTAIC ELECTRIC SYSTEM.

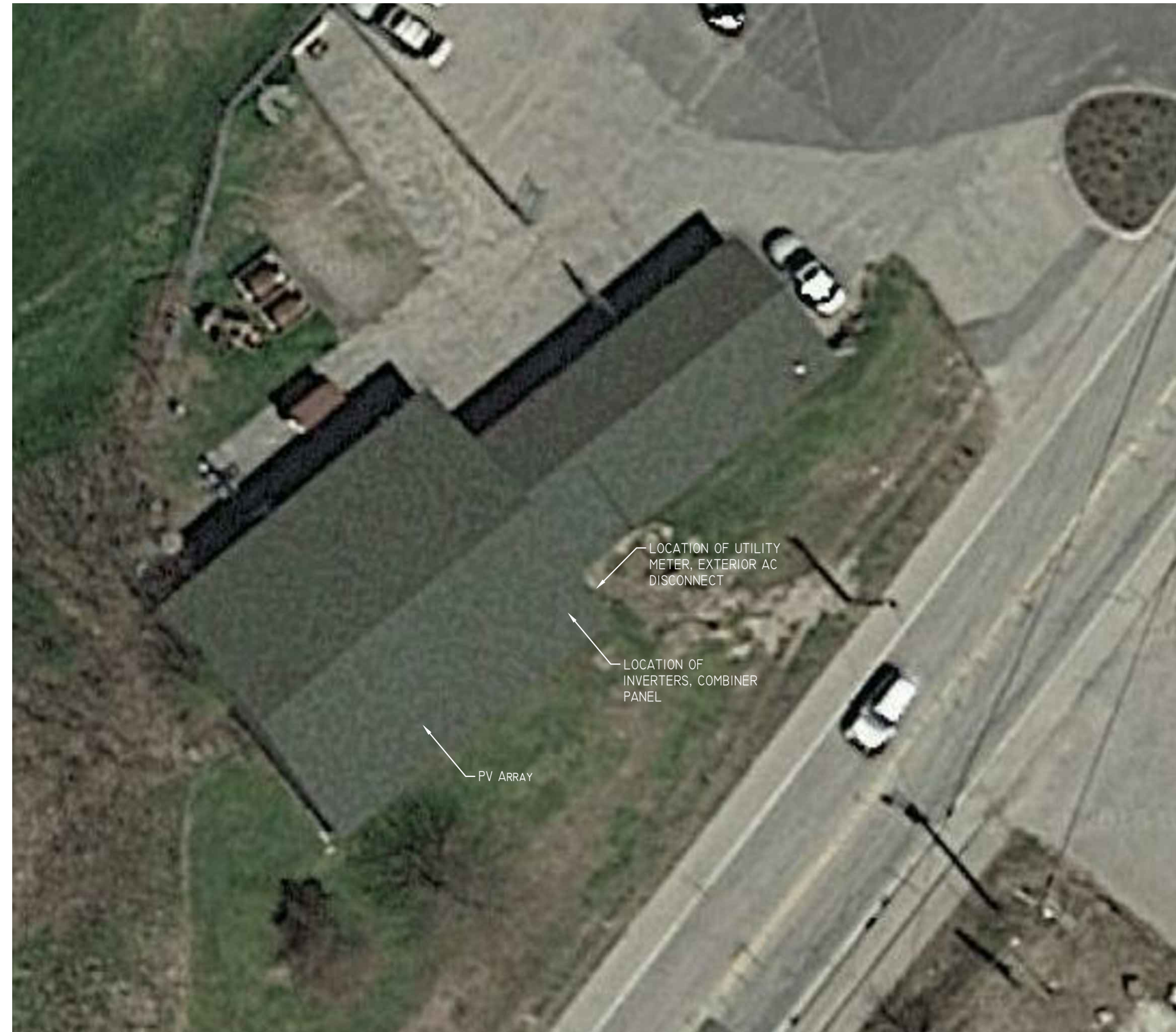
MODULE TYPE	(76) Q CELL Q.PEAK-G4.1 305
INVERTER	(1) SE11400A-US (1) SE6000H-US
OPTIMIZER	(76) SOLAREEDGE P320
ARRAY PITCH	16°
ARRAY AZIMUTH	140°
RACKING	IRONRIDGE XR100 ALUMINUM RAIL
ROOF ATTACHMENT	ALUMINUM L-FEET WITH SS LAG SCREWS, 3 X5/16

DESIGN CRITERIA:

OCCUPANCY	RESIDENTIAL
DESIGN WIND LOAD	100 MPH
RISK CATEGORY	I
GROUND SNOW LOAD	95 PSF
EXPOSURE CATEGORY	C
ROOF HEIGHT	6' ABOVE GRADE TO EAVES
ROOF COMPOSITION	ASPHALT SHINGLE
RAFTER	2"X10"
RAFTER SPACING	UNKNOWN

EQUIPMENT LOCATIONS:

INVERTERS AND COMBINER PANEL LOCATED ON INTERIOR WALL ADJACENT TO SERVICE ENTRANCE. EXTERIOR AC DISCONNECTED LOCATED ADJACENT TO METER.



142 PRESUMSCOT STREET
PORTLAND, ME 04103
(207)-221-6342

CLIENT:

RIVERSIDE GOLF COURSE
1158 RIVERSIDE ST
PORTLAND ME, 04103

SYSTEM TYPE:

23.18KWDC SOLAR
PHOTOVOLTAIC SYSTEM

DESIGNED BY: STE

REVISION: 0

PRINT SIZE: 11" X 17"

DATE: 2/21/2018

DWG TITLE:

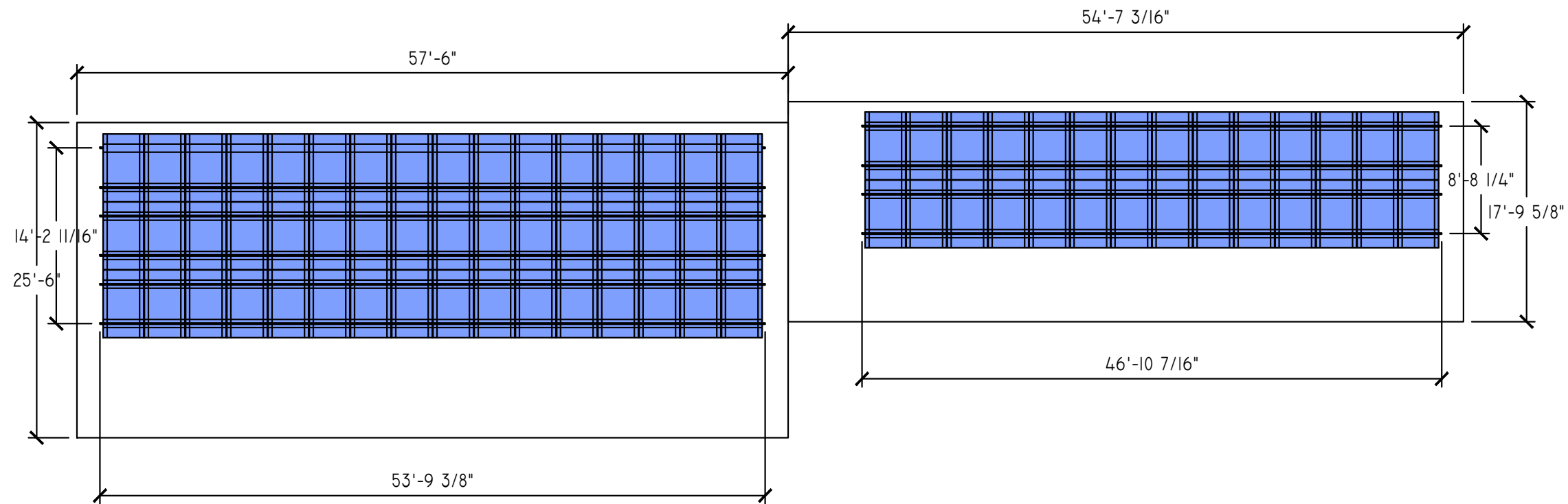
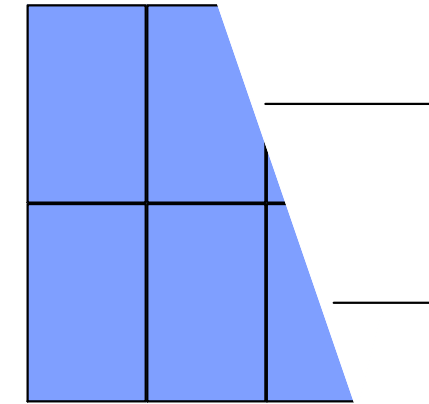
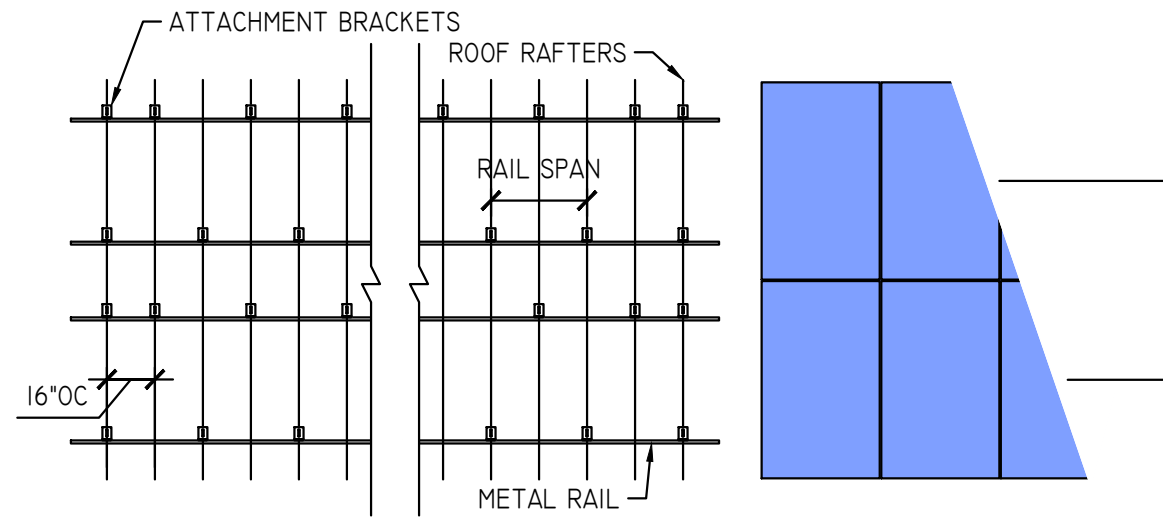
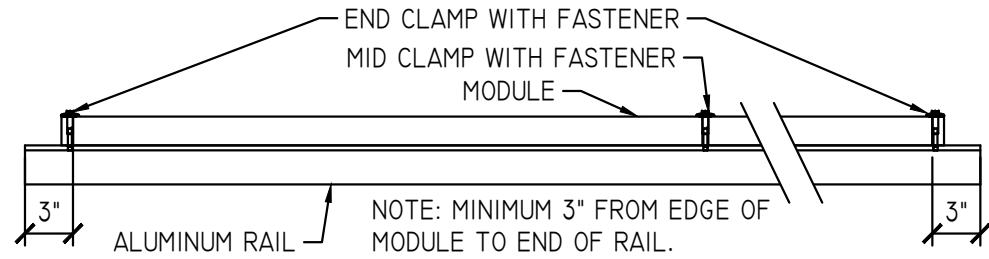
SITE PLAN

DWG NUMBER:

A001

© COPYRIGHT REVISION ENERGY

THIS DIAGRAM IS PROVIDED AS A SERVICE AND IS BASED ON THE UNDERSTANDING OF THE INFORMATION SUPPLIED. IT IS SUBJECT TO CHANGE BASED ON ACTUAL CONDITIONS, APPLICABLE EDITION OF THE NATIONAL ELECTRIC CODE, AND LOCAL GOVERNMENTAL AUTHORITIES.



142 PRESUMSCOT STREET
 PORTLAND, ME 04103
 (207)-221-6342

CLIENT:

RIVERSIDE GOLF COURSE
 1158 RIVERSIDE ST
 PORTLAND ME, 04103

SYSTEM TYPE:

23.18KWDC SOLAR
 PHOTOVOLTAIC SYSTEM

DESIGNED BY: STE
 REVISION: 0
 PRINT SIZE: 11" X 17"
 DATE: 2/21/2018
 DWG TITLE:

MODULE LAYOUT

DWG NUMBER:
 A002

© COPYRIGHT REVISION ENERGY

THIS DIAGRAM IS PROVIDED AS A SERVICE AND IS BASED ON THE UNDERSTANDING OF THE INFORMATION SUPPLIED. IT IS SUBJECT TO CHANGE BASED ON ACTUAL CONDITIONS, APPLICABLE EDITION OF THE NATIONAL ELECTRIC CODE, AND LOCAL GOVERNMENTAL AUTHORITIES.

MODULE SPECIFICATIONS	
Q CELL Q.PEAK-G4.1 305 QTY 76	
STC RATING	305
VMP	32.62
IMP	9.35
Voc	40.05
Isc	9.84
TEMP COEFF. Voc %	-0.0028

MODULE-LEVEL DC OPTIMIZER SPECIFICATIONS	
SOLAREEDGE P320 QTY 76	
NOMINAL DC RATING (WATTS)	320
MAX OUTPUT CURRENT Idc	15

GRID TIED INVERTER SPECIFICATIONS	
SEI1400A-US QTY 1	
NOMINAL AC RATING	11400
NOMINAL VAC	240
MAX IAC	47.5
CEC EFFICIENCY	97.50%
SE6000H-US QTY 1	
NOMINAL AC RATING (WATTS)	6000
NOMINAL VAC	240
MAX IAC	25
CEC EFFICIENCY	99.00%

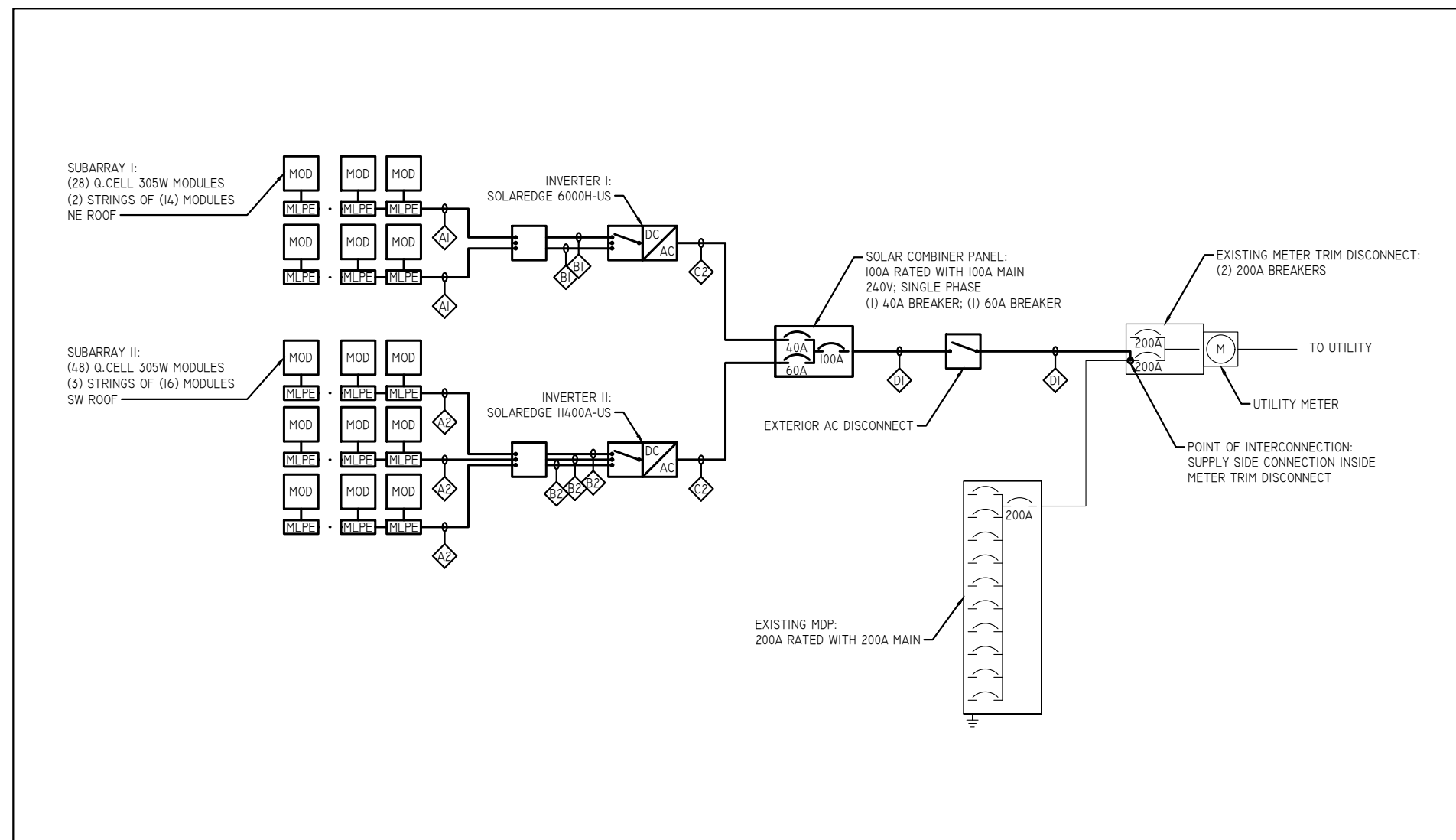
DESIGN NOTES:

- ALL CONDUCTORS SHALL BE COPPER UNLESS NOTED OTHERWISE.
- SYSTEM VOLTAGE DROP SHALL NOT EXCEED 5%
- LOWEST EXPECTED AMBIENT TEMPERATURE IS BASED ON ASHRAE EXTREME MIN FOR THE SPECIFIED LOCATION.
- AVERAGE HIGH TEMPERATURE IS BASED ON ASHRAE 2% AVG. FOR THE SPECIFIED LOCATION.

LINE TYPES:

- - - DEMOLITION
- _____ EXISTING
- _____ NEW

WIRING SCHEDULE								
TAG	DESCRIPTION	SETS	CABLE	INSULATION	CONDUIT	LENGTH	CONDUIT FILL	VOLTAGE DROP
A1	PV ARRAY TO JUNCTION BOX	1	L:(4)#10 AWG N:(0)#4 AWG G:(1)#6 AWG	PV		40 FT		0.43%
A2	PV ARRAY TO JUNCTION BOX	1	L:(6)#10 AWG N:(0)#4 AWG G:(1)#6 AWG	PV		40 FT		0.43%
B1	JUNCTION BOX TO INVERTER	1	L:(4)#10 AWG N:(0)#10 AWG G:(1)#10 AWG	THWN-2	3/4" EMT	50 FT	19.80%	0.54%
B2	JUNCTION BOX TO INVERTER	1	L:(6)#10 AWG N:(0)#10 AWG G:(1)#10 AWG	THWN-2	3/4" EMT	50 FT	27.80%	0.54%
C1	INVERTER TO COMBINER PANEL	1	L:(2)#8 AWG N:(1)#10 AWG G:(1)#10 AWG	THWN-2	3/4" EMT	20 FT	21.70%	0.33%
C2	INVERTER TO COMBINER PANEL	1	L:(2)#6 AWG N:(1)#10 AWG G:(1)#10 AWG	THWN-2	3/4" EMT	20 FT	27.00%	0.39%
D1	COMBINER PANEL TO INTERCONNECTION	1	L:(2)#3 AWG N:(1)#8 AWG G:(1)#8 AWG	THWN-2	1" EMT	50 FT	31.00%	0.94%



142 PRESUMSCOT STREET
 PORTLAND, ME 04103
 (207)-221-6342

CLIENT:

RIVERSIDE GOLF COURSE
 1158 RIVERSIDE ST
 PORTLAND ME, 04103

SYSTEM TYPE:

23.18KWDC SOLAR
 PHOTOVOLTAIC SYSTEM

DESIGNED BY: STE

REVISION: 0

PRINT SIZE: 11" X 17"

DATE: 2/21/2018

DWG TITLE:
 ONE LINE AND EQUIPMENT
 SPECIFICATIONS

DWG NUMBER:
 E001

© COPYRIGHT REVISION ENERGY

THIS DIAGRAM IS PROVIDED AS A SERVICE AND IS BASED ON THE UNDERSTANDING OF THE INFORMATION SUPPLIED. IT IS SUBJECT TO CHANGE BASED ON ACTUAL CONDITIONS, APPLICABLE EDITION OF THE NATIONAL ELECTRIC CODE, AND LOCAL GOVERNMENTAL AUTHORITIES.

SUMMARY			
TYPE	PRODUCT	DIMENSIONS	QUANTITY
MODULE:	Q CELL Q.PEAK-G4.1 305	1000MM x 1670MM	76
RAIL:	IRON RIDGE XRI00	248 IN	(20) FULL (10) CUT
FASTENERS:	IRON RIDGE UFO	0.375 IN	162 MIN

RAIL LENGTH								
RAIL SECTION TAG	NUMBER OF RAIL SECTIONS	QTY OF PANELS IN SECTION	MODULE ORIENTATION	RAIL ORIENTATION	RAIL LENGTH (IN)	FULL STICKS	CUT PIECE (IN)	SCRAP (IN)
S1	4	14	PORTRAIT	HORIZONTAL	562	2	66	182
S2	6	16	PORTRAIT	HORIZONTAL	64 1/2	2	145 1/2	102 1/2

CUT LIST	
RAIL LENGTH (IN)	QTY
FULL	20
66	4
145 1/2	6

